



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,817	02/09/2004	Daniel G. Schmidt	122239.00002	9235

23598 7590 07/11/2006

BOYLE FREDRICKSON NEWHOLM STEIN & GRATZ, S.C.
250 E. WISCONSIN AVENUE
SUITE 1030
MILWAUKEE, WI 53202

EXAMINER

BOOSALIS, FANI POLYZOS

ART UNIT	PAPER NUMBER
----------	--------------

2884

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,817

Applicant(s)

SCHMIDT ET AL.

Examiner

Faye Boosalis

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-18 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 19-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/1/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II of claims 10-18 and amended dependent claims 19-27 in the reply filed on 17 April 2006 is acknowledged.
2. Claims 1-9 and 28-36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions or species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 17 April 2006.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10-27 are rejected under 35 U.S.C. 102(b) as being anticipated by *Westerlund et al (US 4,988,866)*.

Regarding claim 10, Westerlund discloses a test instrument for therapeutic radiation comprising: a set of spaced radiation flux detectors (1-10) providing flux signal (i.e. signal values); at least one radiation energy-detector providing an energy signal; a storage system (i.e. readout unit) for storing benchmark flux values (i.e. reference value from the initial machine calibration or predetermined setting of energy, field size and radiation dose) associated with a set of energy ranges; and processing circuitry comparing at least one of the flux signals to the benchmark flux

Art Unit: 2884

values of an energy range corresponding to the energy signal to provide an indication of any improper operation of a measured radiation source (col. 2, lines 50-68 and col. 3, lines 1-10).

Regarding claim 11, Westerlund discloses a test instrument wherein the energy ranges are centered at energies selected from the group consisting of: 6, 9, 12, 16, and MeV and 6, 18, and 23 MV (col. 1, lines 9-17).

Regarding claim 12, Westerlund discloses a test instrument further including a display (51) displaying one of the energy ranges (col. 3, lines 50-53).

Regarding claim 18, Westerlund discloses wherein the radiation energy-detector is a set of detector elements (1-10) providing radiation signals at least one of which detector element has a scatter element positioned behind it with respect to the measured radiation so that the detector element is sensitive to backscatter (col. 3, lines 16-19) and wherein the energy signal is derived from an algebraic combination of the radiation signals (col. 1, lines 61-66).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Westerlund et al (US 4,988,866)* as applied to claim 10 above, and further in view of *Boux et al (US 4,206,355)*.

Regarding claim 13, Westerlund discloses a test instrument for therapeutic radiation comprising: a set of spaced radiation flux detectors (1-10) providing flux signal (i.e. signal values); at least one radiation energy-detector providing an energy signal; a storage system (i.e. readout unit) for storing benchmark flux values (i.e. reference value from the initial machine calibration or predetermined setting of energy, field size and radiation dose) associated with a set of energy ranges; and processing circuitry comparing at least one of the flux signals to the benchmark flux values of an energy range corresponding to the energy signal to provide an indication of any improper operation of a measured radiation source (col. 2, lines 50-68 and col. 3, lines 1-10). Westerlund does not disclose a processing circuit providing an alarm signal. Boux discloses a monitoring system designed for measuring the position, intensity, uniformity and directivity of a radiation beam, comprising a processing circuitry (i.e. comparator) wherein the processing circuitry provides an alarm signaling an energy deviating more than a predetermine amount from a stored energy range (col. 5, lines 54-59). Boux teaches the processing circuitry triggers a safety system or emit an alarm signal if there is any disagreement between the voltages and therefore between the dose rates measured by the electrodes (col. 5, lines 54-59). Therefore, it would have been obvious to modify the system disclosed by Westerlund, to include an alarm-signaling device, as disclosed supra by Boux, to allow for a more versatile testing system.

Regarding claims 14-15, Westerlund discloses the flux signals and benchmark flux values provide a measure of radiation parameters (col. 1, lines 30-45). Westerlund

Art Unit: 2884

does not disclose the processing circuit provides an alarm to signal when radiation flatness or symmetry is more than a predetermined amount different from the benchmark flux value. Boux discloses a monitoring system designed for measuring the position, intensity, uniformity and directivity of a radiation beam, comprising a processing circuitry (i.e. comparator) wherein the processing circuitry provides an alarm signaling an energy deviating more than a predetermine amount from a stored energy range (col. 5, lines 54-59). Boux teaches the processing circuitry triggers a safety system or emit an alarm signal if there is any disagreement between the voltages and therefore between the dose rates measured by the electrodes (col. 5, lines 54-59). Therefore, it would have been obvious to modify the system disclosed by Westerlund, to include an alarm-signaling device, as disclosed supra by Boux, to allow for a more versatile testing system.

Regarding claim 16, Boux discloses a monitoring system wherein the processing circuitry provides an alarm when the flux signals are more than a predetermined amount different from benchmark flux values for the corresponding energy range (col. 5, lines 54-59).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Westerlund et al* (US 4,988,866) as applied to claim 10 above, and further in view of *Collica et al* (US 4,568,828).

Regarding claim 17, Westerlund discloses a test instrument for therapeutic radiation comprising: a measuring block from a suitable material, preferably a plastic material, with a number of radiation detectors, e.g. ionization chambers or

semiconductor detectors, that are mounted in specific locations in the block. In front of the detectors is material for dose buildup and formation of electron equilibrium and for one detector also filter material for energy checks (col. 2, lines 50-57). Westerlund does not disclose of multiple filters. Collica discloses a testing instrument for therapeutic radiation comprising a set of detectors having different filtrations (i.e. shields) to provide radiation signals and wherein the energy signal is derived from an algebraic combination of the radiation signals from the set of detectors (See Abstract). Collica teaches serially interposing a plurality of shields between the sample and detector, each shield having a given thickness to absorb a desired fraction of the radiation; measuring the activity of the sample as attenuated by the shields; calculating the actual activity of the sample at each level of attenuation; and comparing the measured activities with the calculated activities (See Abstract). Therefore, it would have been obvious to modify the system disclosed by Westerlund, to include multiple filters, as disclosed supra by Collica, to allow for a more versatile testing system.

Allowable Subject Matter

8. Claims 19-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 19-27, the prior art does not disclose or fairly suggest of a test instrument for therapeutic radiation comprising: a housing providing opposed first and second faces, holding flux-detectors between first and second face, whereby electrons may be measured with the housing in a first orientation by exposing the radiation flux-

detectors through the first face, measuring photons by flipping the housing to a second orientation to expose the detector through the second face and flipping the housing orientation to the first or second surface whereby the third face includes a display indicating radiation type.

Conclusion

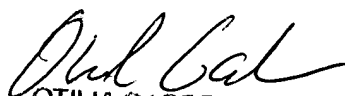
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Boosalis whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2884

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FB


OTILIA GABOR
PRIMARY EXAMINER